

IN THE CLAIMS:

Please amend claims as follows:

1. A method for estimating a bit error rate of a received signal of a wireless telecommunication system, said method comprising the steps of:
 - a) estimating a channel impulse response ~~based on~~from said received signal;
 - b) subjecting said received signal to a channel equalizing operation performed ~~on the basis of time statistics by using time domain characteristics~~ derived from said channel impulse response;
 - c) determining adaptive reference time domain characteristics ~~based on~~from an actual weighting information obtained from said channel estimating step;
 - d) subjecting said received signal to a reference channel equalizing operation performed ~~on the basis of~~by using said adaptive reference time domain characteristics; and
 - e) estimating said bit error rate by comparing output signals of said channel equalizing operation and said reference channel equalizing operation.
2. A method according to claim 1, wherein said received signal is a matched filtered signal, and wherein said actual weighting information comprises an information obtained from a corresponding matched filter operation.
3. A method according to claim 1, wherein said channel impulse response is estimated by using correlations between received and known training sequences.
4. A method according to claim 3, wherein said

correlations represent delay spread and multi path propagation effects caused by a radio channel through which said received signal has been transmitted.

5. A method according to claim 3, wherein said correlations are ~~used in said channel equalizing operation as~~ a decision metric addition to matched filtered samples.

6. A method according to claim 1, wherein said adaptive reference time domain characteristics are ~~used as~~ a channel delay spread and signal distortion metric in said reference channel equalizing operation.

7. A method according to claim 1, wherein said estimating of said bit error rate is performed by calculating a difference between said output signals of said channel equalizing operation and said reference channel equalizing operation over a predetermined measuring period.

Claims 8-15 (Cancelled)

16. An apparatus for estimating a bit error rate in a received signal of a wireless telecommunication system, said apparatus comprising:

- a) estimating means ~~(1)~~ for estimating a channel impulse response ~~based on~~ from said received signal;
- b) channel equalizing means ~~(4)~~ for subjecting said received signal to a channel equalizing operation performed ~~on the basis of time statistics~~ by using time domain characteristics derived from said channel impulse response;
- c) determining means ~~(7)~~ for determining adaptive reference time domain characteristics ~~based on~~ from an

actual weighting information supplied from said estimating means ~~(1)~~;

d) reference channel equalizing means ~~(5)~~ for subjecting said received signal to a reference channel equalizing operation performed ~~on the basis of~~ by using said adaptive reference time domain characteristics; and

e) comparing means ~~(6)~~ for comparing output signals of said channel equalizing means ~~(4)~~ and said reference channel equalizing means ~~(5)~~ to obtain said estimation of said bit error rate.

17. An apparatus according to claim 16, further comprising a matched filter ~~(3)~~ through which said received signal is supplied to said channel equalizing means ~~(4)~~ and said reference channel equalizing means ~~(5)~~, wherein said weighting information comprises an information obtained from said matched filter ~~(3)~~.

18. An apparatus according to claim 16, wherein said estimating means ~~(1)~~ is arranged to estimate said channel impulse response by using correlations between received and known training sequences.

19. An apparatus according to claim 18, wherein said channel equalizing means ~~(4)~~ is arranged to ~~use~~ estimate by using said correlations as a decision metric addition to matched filtered samples.

20. An apparatus according to claim 16, wherein said reference channel equalizing means ~~(5)~~ is arranged to ~~use~~ estimate by using said adaptive reference time domain characteristics as a channel delay spread and signal distortion metric.

21. An apparatus according to claim 16, wherein said comparing means ~~(6)~~ comprises counting means for counting the differences between the output signals of said channel equalizing means ~~(4)~~ and said reference channel equalizing means ~~(5)~~ over a predetermined measuring period.

Claims 22-25 (Cancelled)